

REGULATIONS FOR THE CONTROL AND ABATEMENT OF AIR POLLUTION (9 VAC 5 CHAPTER 40)

PART II.
Emission Standards.

ARTICLE 4.
Emission Standards for General Process Operations (Rule 4-4).

9 VAC 5-40-240. Applicability and designation of affected facility.

A. Except as provided in subsections C and D of this section, the affected facility to which the provisions of this article apply is each process operation, each process gas stream and each combustion installation.

B. The provisions of this article apply throughout the Commonwealth of Virginia.

C. Exempted from the provisions of this article are the following:

1. Process operations with a process weight rate capacity less than 100 pounds per hour.

2. Any combustion unit using solid fuel with a maximum heat input of less than 350,000 Btu per hour.

3. Any combustion unit using liquid fuel with a maximum heat input of less than 1,000,000 Btu per hour.

4. Any combustion unit ~~equipment unit~~ using gaseous fuel with a maximum heat input of less than 10,000,000 Btu per hour.

D. The provisions of this article do not apply to affected facilities subject to other emission standards in this chapter.

9 VAC 5-40-250. Definitions.

A. For the purpose of ~~these regulations~~ the Regulations for the Control and Abatement of Air Pollution and subsequent amendments or any orders issued by the board, the words or terms shall have the meaning given them in subsection C of this section.

B. As used in this article, all terms not defined here shall have the meaning given them in 9 VAC 5 Chapter 10 (9 VAC 5-10-10 et seq.), unless otherwise required by context.

C. Terms defined.

"Combustion installation" means all combustion units within a stationary source in operation prior to October 5, 1979.

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"Combustion unit" means any type of stationary equipment in which solid, liquid or gaseous fuels and refuse are burned, including, but not limited to, furnaces, ovens, and kilns.

"Heat input" means the total gross calorific value of all fuels burned.

"Manufacturing operation" means any process operation or combination of physically connected dissimilar process operations which is operated to effect physical or chemical changes or both in an article.

"Materials handling equipment" means any equipment used as a part of a process operation or combination of process operations which does not effect a physical or chemical change in the material or in an article, such as, but not limited to, conveyors, elevators, feeders or weighers.

"Physically connected" means any combination of process operations connected by materials handling equipment and designed for simultaneous complementary operation.

"Process operation" means any method, form, action, operation or treatment of manufacturing or processing, including any storage or handling of materials or products before, during or after manufacturing or processing.

"Process unit" means any step in a manufacturing or process operation which results in the emission of pollutants to the atmosphere.

"Process weight" means total weight of all materials introduced into any process unit which may cause any emission of pollutants. Process weight includes solid fuels charged, but does not include liquid and gaseous fuels charged or combustion air for all fuels.

"Process weight rate" means a rate established as follows:

a. For continuous or long-run steady-state process operations, the total process weight for the entire period of continuous operation or for a typical portion of it, divided by the number of hours of such period or portion of it.

b. For cyclical or batch process operations, the total weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

"Reasonably available control technology" means the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available, considering technological and economic feasibility.

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"Rated capacity" means the capacity as stipulated in the purchase contract for the condition of 100% load, or such other capacities as mutually agreed to by the board and owner using good engineering judgment.

"Total capacity" means with reference to a combustion installation, the sum of the rated capacities (expressed as heat input) of all units of the installation which must be operated simultaneously under conditions or 100% use load.

9 VAC 5-40-310. Standard for nitrogen oxides.

A. No owner or other person shall cause or permit to be discharged from any affected facility any nitrogen oxides emissions in excess of that resultant from using reasonably available control technology.

B. Unless the owner demonstrates otherwise to the satisfaction of the board, compliance with the provisions of subsection A of this section shall be achieved for the applicable source types by the use of reasonably available control technology as defined in 9 VAC 5-40-311.

C. The provisions of this section apply to all facilities that (i) are within a stationary source in the Northern Virginia Emissions Control Area (see 9 VAC 5-20-206) and (ii) are within a stationary source that has a theoretical potential to emit 50 tons per year or greater. Theoretical potential to emit shall be based on emissions at design capacity or maximum production and maximum operating hours (8,760 hours/year) before add-on controls, unless the facility is subject to state and federally enforceable permit conditions which limit production rates or hours of operation. Emissions from all facilities, including facilities exempt from any other emission standard for nitrogen oxides in this chapter, shall be added together to determine theoretical potential to emit.

D. For facilities subject to the provisions of subsection A of this section, the owners shall within three months of the effective date of the emission standard (i) notify the board of their applicability status, (ii) commit to making a determination as to what constitutes reasonably available control technology for the facilities and (iii) provide a schedule acceptable to the board for making this determination and for achieving compliance with the emission standard as expeditiously as possible but no later than May 31, 1995.

E. For facilities to which the provisions of subsection B of this section are applicable, the owners shall within three months of the effective date of the emission standard (i) notify the board of their applicability status, (ii) commit to accepting the emission standard as reasonably available control technology for the applicable facilities or to submitting a demonstration as provided in subsection B of this section and (iii) provide a schedule acceptable to the board for submitting the demonstration no later than January 1, 1994, and for achieving compliance with the emission standard as expeditiously as possible but no later than May 31, 1995.

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F. No owner or other person shall cause or permit to be discharged from any facility any nitrogen oxides emissions in excess of those necessary to achieve emissions reductions identified in any attainment or maintenance plan or any other legally enforceable document submitted to the U.S. Environmental Protection Agency as a revision to the state implementation plan.

1. The facilities to which the provisions of this subsection apply are facilities within the Richmond Emissions Control Area (see 9 VAC 5-20-206) identified in any attainment or maintenance plan submitted to the U.S. Environmental Protection Agency as a revision to the state implementation plan.

2. The board may establish case-by-case emission limits and other requirements as may be necessary to achieve the required emission reductions via permits, consent orders, or other legally enforceable means.

3. Facilities subject to this subsection shall be in compliance with any limits and other requirements established pursuant to subsection F 2 of this section within the timeframes established in any state plan revision, permit, or other legally enforceable document.

4. The provisions of subsections A through E of this section shall not apply to facilities within the Richmond Emissions Control Area (see 9 VAC 5-20-206).

~~G. Requirements for the control of nitrogen oxides under this section shall apply only from May 1 through September 30.~~

9 VAC 5-40-311. Reasonably available control technology guidelines for stationary sources of nitrogen oxides.

A. General.

Unless otherwise approved by the board, this section defines reasonably available control technology for the purposes of compliance with 9 VAC 5-40-310 A for the source types specified here.

B. Definitions.

1. For the purpose of ~~these regulations~~ this section and subsequent amendments of any orders issued by the board, the words or terms shall have the meaning given them in subdivision B 3 of this section.

2. As used in this section, all terms not defined here shall have the meaning given them in 9 VAC 5 Chapter 10 (9 VAC 5-10-10 et seq.), unless otherwise required by context.

3. Terms defined.

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"Capacity factor" means the ratio of the average load on a machine or equipment for the period of time considered to be the capacity rating of the machine or equipment.

"Combustion modification" means any change to the configuration of the burners or the firing method or mechanism of any combustion equipment for the purpose of reducing the emissions of nitrogen oxides. Acceptable combustion equipment changes within the context of this term include, but are not limited to, reburning, burners out of service, flue gas recirculation, fuel substitution, engine adjustments, engine modifications, fuel modifications and the addition of over fire air and low nitrogen oxides burner systems.

~~"Combustion unit" means any furnace, with fuel burning equipment appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat to be utilized by direct heat transfer. This includes, but is not limited to, the following facilities: drying ovens, burnout ovens, annealing furnaces, melting furnaces, holding furnaces, and space heaters.~~

"Fossil fuel" means natural gas, petroleum, coal and any form of solid, liquid or gaseous fuel derived from such materials for the purpose of creating useful heat.

"Fuel burning equipment" means any furnace, with fuel burning equipment appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat to be utilized by indirect heat transfer or producing power. This includes facilities that are designed as boilers to produce steam or heated water and are designed to burn either fossil fuel or refuse derived fuel. It does not include such facilities if designed primarily to burn raw refuse.

~~"Fuel burning equipment installation" means all fuel burning equipment units within a stationary source in operation prior to January 1, 1993.~~

"Gas turbine" means a rotary internal combustion engine fueled by liquid or gaseous fuel.

"Heat input" means the total gross calorific value of all fuels burned.

"Incinerator" means any device, apparatus, equipment, or structure using combustion or pyrolysis for destroying, or reducing the volume of any material or substance.

"Internal combustion engine" means a reciprocating engine which is fueled by liquid or gaseous fuel.

"Process heater" means any fuel burning equipment which is used to produce heat for use in a manufacturing process. This term includes boilers which use a

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heat transfer medium other than water, but does not include drying ovens, steam generating units, or other drying apparatus.

"Rated capacity" means the capacity as stipulated in the purchase contract for the condition of 100% load, or such other capacities as mutually agreed to by the board and owner using good engineering judgment.

"Refuse derived fuel (RDF)" means fuel produced from solid or liquid waste (includes materials customarily referred to as refuse and other discarded materials) or both which has been segregated and classified, with the useable portions being put through a size reduction and classification process which results in a relatively homogeneous mixture.

"Steam generating unit" means any furnace, boiler or other device used for combusting fuel for the purpose of producing steam.

~~"Total capacity" means, with reference to a fuel burning equipment installation, the sum of the rated capacities (expressed as heat input) of all units of the installation which must be operated simultaneously under conditions of 100% use load.~~

C. Definition of reasonably available control technology.

1. For the source types listed below, reasonably available control technology is defined as the emission limits specified below based upon the application of combustion modification; however, owners may elect to use any alternative control technology, provided such alternative is capable of achieving the prescribed emission limits.

a. Steam generating units and process heaters. The maximum allowable emission rate for nitrogen oxides from steam generating units and process heaters is as follows:

TABLE 4-4C

Maximum Allowable Emission Rates for
Nitrogen Oxides Emissions from
Steam Generating Units and Process Heaters
(pounds per million Btu heat input)

Fuel Type	Firing Method		
	Face* and Tangential	Cyclone	Stokers
Coal – wet bottom	1.0	.55	N/A

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Coal – dry bottom	.38	N/A	0.4
Oil or Gas or both	.25	.43	N/A
Gas only	.20	N/A	N/A

* Includes wall, opposed and vertical firing methods

b. Gas turbines. The maximum allowable emission rate for nitrogen oxides from gas turbines is as follows:

TABLE 4-4D

Maximum Allowable Emission Rates for
Nitrogen Oxides Emissions from
Gas Turbines
(parts per million by dry volume corrected to 15% oxygen)

Fuel Type	Turbine Type	
	Simple Cycle	Combined Cycle
Gas	42	42
Oil	65/77*	65/77*

* Limit shall be 65 ppm for fuel bound nitrogen (FBN) < 0.015% and 77 ppm for FBN ≥ .015%.

2. Any demonstration of compliance with the limits in subdivision C 1 of this section shall be on a daily basis.

3. For the source types and sizes listed below, a demonstration of reasonably available control technology is not required as provided in 9 VAC 5-40-310 B.

~~a. Any steam generating unit, process heater or gas turbine with a rated capacity of less than 100,000,000 Btu per hour.~~

b. Any steam generating unit, process heater or gas turbine with an annual capacity factor of less than 5.0%, except that three months following any calendar year during which the capacity factor is 5.0% or greater, the facility shall be subject to 9 VAC 5-40-310 A or B, as applicable, and the owner shall comply with 9 VAC 5-40-310 D or E, as applicable, except the compliance date shall be two years after approval of the schedule by the board. Time periods during which a stand-by unit is used

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to provide replacement services for a unit being altered to comply with the provisions of 9 VAC 5-40-310 A or B shall not be used as the basis for a determination that the stand-by unit exceeded the annual capacity factor criteria of 5.0%.

~~_____ c. Any combustion unit with a rated capacity of less than 50,000,000 Btu per hour.~~

d. Any stationary internal combustion engine with a rated capacity of less than 450 hp of output power.

e. Any incinerator with a maximum capacity of less than 50 tons of waste per day.

f. Any incinerator or thermal or catalytic oxidizer used exclusively as air pollution control equipment.

g. Any generator used solely to supply emergency power to buildings during periods when normal power supplies are interrupted and during periods of scheduled maintenance.

~~_____ D. Emission allocation system:~~

~~_____ 1. This section applies only to steam generating units and gas turbines within fuel burning equipment installations not exempted from the requirements of 9 VAC 5-40-310 B by subdivision C 3 of this section.~~

~~_____ 2. The maximum allowable nitrogen oxides emissions, expressed as pounds per hour, for a fuel burning equipment installation shall be the product of the total capacity and the applicable emission limit specified in subdivision C 1 a of this section.~~

~~_____ 3. The allowable nitrogen oxides emissions for a fuel burning equipment installation when operating at less than total capacity, shall be the product of the percent load and emission allocation. The percent load shall be the quotient of the actual load and the rated capacity. The emission allocation shall be determined using procedures set forth in subdivision D 4 of this section.~~

~~_____ 4. The emission allocation for each of the fuel burning equipment units of the fuel burning equipment installation shall be its designated portion of the maximum allowable nitrogen oxides emissions from the fuel burning equipment installation when operating at total capacity. The portions shall be proposed by the owner initially and determined in a manner mutually acceptable to the board and the owner. Once accepted by the board, the portions may not be changed without the consent of the board.~~

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ARTICLE 8.

Emission Standards for Fuel Burning Equipment (Rule 4-8).

9 VAC 5-40-880. Applicability and designation of affected facility.

- A. Except as provided in subsections C, D, and E of this section, the affected facility to which provisions of this article apply is fuel burning equipment.
- B. The provisions of this article apply throughout the Commonwealth of Virginia.
- C. Exempted from the provisions of this article are the following:
 - 1. Any fuel burning equipment unit using solid fuel with a maximum heat input of less than 350,000 Btu per hour.
 - 2. Any fuel burning equipment unit using liquid fuel (exclusive of coal slurry mixtures) with a maximum input of less than 1,000,000 Btu per hour.
 - 3. Any fuel burning equipment unit using gaseous fuel with a maximum heat input of less than 10,000,000 Btu per hour.
- D. The provisions of this article do not apply to fuel burning equipment units that power mobile sources but are removed for maintenance or repair and testing.
- E. The provisions of this article do not apply to stationary internal combustion engines.

9 VAC 5-40-890. Definitions.

- A. For the purpose of ~~these regulations~~ the Regulations for the Control and Abatement of Air Pollution and subsequent amendments or any orders issued by the board, the words or terms shall have the meaning given them in subsection C of this section.
- B. As used in this article, all terms not defined here shall have the meaning given them in 9 VAC 5 Chapter 10 (9 VAC 5-10-10 et seq.), unless otherwise required by context.
- C. Terms defined.

"Btu" means British thermal unit.

"Capacity factor" means the ratio of the average load on a machine or equipment for the period of time considered to the capacity rating of the machine or equipment.

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"Combined cycle system" means a system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

"Combustion turbine" means an enclosed fossil or other fuel-fired device that is composed of a compressor, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

"Continuous emission monitoring system" or "CEMS" means the equipment required under 9 VAC 5-40-1000 E to sample, analyze, measure and provide, by readings taken at least once every 15 minutes of the measured parameters, a permanent record of NO_x emissions, expressed in tons per hour for NO_x. The following systems are component parts, to the extent consistent with 40 CFR Part 75, in a continuous emission monitoring system:

- a. Flow monitor;
- b. NO_x pollutant concentration monitors;
- c. Diluent gas monitor (O₂ or CO₂);
- d. A continuous moisture monitor; and
- e. An automated data acquisition and handling system.

"Electric generating unit" means any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electricity output to any utility power distribution system for sale shall be considered an electric generating unit.

"Generator" means a device that produces electricity.

"Fossil fuel" means natural gas, petroleum, coal and any form of solid, liquid or gaseous fuel derived from such materials for the purpose of creating useful heat.

"Fossil-fuel fired" means, with regard to a unit:

1. The combustion of fossil fuel, alone or in combination with any other fuel, where fossil fuel actually combusted comprises more than 50 percent of the annual heat input on a Btu basis during any year starting in 1995 or, if a unit had no heat input starting in 1995, during the last year of operation of the unit prior to 1995; or

2. The combustion of fossil fuel, alone or in combination with any

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other fuel, where fossil fuel is projected to comprise more than 50 percent of the annual heat input on a Btu basis during any year; provided that the unit shall be "fossil fuel-fired" as of the date, during such year, on which the unit begins combusting fossil fuel.

"Fossil-fuel fired steam generator" means furnace or boiler, or both, used in the process of burning fossil fuel for the primary purpose of providing steam by heat transfer.

"Fuel burning equipment" means any furnace, with fuel burning equipment appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat to be utilized by indirect heat transfer, or by indirect production of power. This includes facilities that are designed as boilers to produce steam or heated water and are designed to burn either fossil fuel or refuse derived fuel. It does not include such facilities if designed primarily to burn raw refuse. This includes fuel burning equipment units (both permanently installed units and portable units) used to replace the power used by mobile sources. For the purposes of this article, stationary combustion turbines are considered to be fuel burning equipment.

"Fuel burning equipment installation" means all fuel burning equipment units within a stationary source in operation prior to October 5, 1979.

"Heat input" means the total gross calorific value of all fuels burned.

"mmBtu" means million Btu.

"MWe" means megawatt electrical.

"Nameplate capacity" means the maximum electrical generating output (in MWe) that a generator can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States Department of Energy standards.

"Non-electric generating unit" means a stationary boiler, combustion turbine, or combined cycle system that is not an electric generating unit and has a maximum design heat input greater than 250 mmBtu/hr.

"Opt-in unit" means a unit that would otherwise be an electric generating unit or non-electric generating unit if not for the size criteria.

"Ozone season" means the period beginning May 1 of a year and ending on September 30 of the same year, inclusive.

"Ozone season heat input" (OSHI) means the product (in mmBtu/time) of the gross calorific value of the fuel (in Btu/lb) and the fuel feed rate into a combustion device (in mass of fuel/time) and does not include the heat derived from preheated combustion air, recirculated flue gases or exhaust from other sources.

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"Rated capacity" means the capacity as stipulated in the purchase contract for the condition of 100% load, or such other capacities as mutually agreed to by the board and owner using good engineering judgment.

"Refuse derived fuel (RDF)" means fuel produced from solid or liquid waste (includes materials customarily referred to as refuse and other discarded materials), or both, which has been segregated and classified, with the useable portions being put through a size reduction and classification process which results in a relatively homogeneous mixture.

"Stationary combustion turbine" means any air-breathing internal combustion engine consisting of an air compressor, combustion chamber, and a turbine wheel.

"Stationary internal combustion engine" means an engine in which fuel is burned within a machine in which energy is converted directly into mechanical motion or work. The energy is used directly for the production of power, locomotion or work. Internal combustion engines include, but are not limited to, diesel engines, gasoline engines, and diesel pumps. For the purposes of this article, stationary combustion turbines are not considered to be stationary internal combustion engines.

"Ton" or "tonnage" means any "short ton" (i.e., 2000 pounds). For the purpose of determining compliance with an applicable NO_x emission limitation, total tons for an ozone season shall be calculated as the sum of all recorded hourly emissions (or the tonnage equivalent of the recorded hourly emissions rates), with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons.

"Total capacity" means with reference to a fuel burning equipment installation, the sum of the rated capacities (expressed as heat input) of all units of the installation which must be operated simultaneously under conditions of 100% use load.

9 VAC 5-40-925. Standard for nitrogen oxides.

A. This section shall apply to existing sources and new or modified sources that are electric generating units or non-electric generating units. Applicability of this section shall not override terms and conditions of any permit or other regulation of the board that are more restrictive than this section.

B. No owner or other person shall cause or permit to be discharged into the atmosphere any nitrogen oxide emissions in excess of 0.25 lb/mmBtu of heat input or 65 percent reduction from 1990 emission rates (lb/mmBtu), whichever is less stringent, from any electric generating unit.

C. No owner or other person shall cause or permit to be discharged into the atmosphere any nitrogen oxide emissions in excess of the levels specified in Table 4-4C of 9 VAC 5-40-311 or 46 percent reduction from 1990 (or another year more

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representative of normal operating conditions) emission rates (lb/mmBtu), whichever is less stringent, from any non-electric generating unit.

D. This section shall apply only during the ozone season.

E. The owner of a unit subject to this section shall be in violation of this section if he fails to submit by November 1 of each year (i) documentation to verify compliance with the applicable emission rate limit in this section or (ii) a NO_x emissions compliance demonstration in accordance with 9 VAC 5-40-926.

9 VAC 5-40-926. NO_x emissions compliance demonstration.

A. Compliance with the applicable emission limit set forth in 9 VAC 5-40-925 may also be achieved through a NO_x emissions compliance demonstration meeting the requirements of this section.

B. The NO_x emissions compliance demonstration submitted pursuant to this section may include (i) electric generating units, (ii) non-electric generating units, (iii) opt-in units or (iv) any combination of subdivisions (i) through (iii) for which a baseline NO_x emission rate has been established through one of the following means:

1. The applicable emission limit in 9 VAC 5-40-925.
2. Any permit issued under 9 VAC 5 Chapter 80.
3. The emission rate established under subsection G 2 of this section.

4. In cases where no emission rate limit is established under subdivision B 1, B 2 or B 3 of this section, the emission rate shall be the emission rate (lb/mmBtu) for the calendar year 1990 (or another year more representative of normal operating conditions) established in a manner acceptable to the board.

C. Compliance with this section shall be demonstrated with the following equation:

$$\sum_{i=1}^n (AOSE_i) \leq \sum_{i=1}^n [(NO_x \text{ Rate}_i) \times (OSHI_i)] + (X) + (Y) + (Z)$$

where:

n is the number of units in the NO_x emissions compliance demonstration (n may equal 1);

S is the sum of all i units;

i is a unit for which a baseline emission rate has been established under subsection B of this section;

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AOSE (Actual Ozone Season Emissions) are the total NO_x emissions (measured as if converted to NO₂) from each unit during the ozone season in tons;

NO_x rate is the more restrictive of the unit-specific emission rates established under subsection B of this section;

OSHI (Ozone Season Heat Input) is the total heat input in millions of Btu's to each unit during the ozone season, as determined by continuous monitoring meeting the requirements of 9 VAC 5-40-1000 E;

X is the number of tons of NO_x either purchased (expressed as a positive integer) or sold (expressed as a negative integer) during the ozone season; and

Y is the number of NO_x emission reduction credits generated in accordance with 9 VAC 5-40-928 used during the ozone season.

Z is the number of NO_x emission reduction credits withdrawn from a bank operating under a banking plan that meets the requirements of 9 VAC 5-40-927.

D. Any owner choosing to sell tons of NO_x shall submit a NO_x emissions compliance demonstration to the board by November 1 of each year in which the tons were sold.

E. NO_x emissions compliance demonstrations shall be submitted to the board by November 1 of each year.

E. A complete NO_x emissions compliance demonstration shall include the following elements in a format acceptable to the board:

1. Identification of each unit in the NO_x emissions compliance demonstration;
2. Each unit's applicable emission rate limit;
3. The ozone season heat input limit for each unit (in mmBtu);
4. The calculation for the equation in 9 VAC 5-40-926 C;
5. A copy of the documentation required by subsection G of this section.
6. A copy of the documentation for any tons of NO_x sold or purchased to meet the compliance demonstration requirements.

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G. The compliance demonstration required by this section may include (i) electric generating units, (ii) non-electric generating units, (iii) opt-in units or (iv) any combination of subdivisions (i) through (iii) in other states provided the following conditions are met:

1. The owner provides documentation acceptable to the board that the other state is agreeable to the inclusion of its units in the compliance demonstration.
2. The owner provides documentation which establishes a baseline emission rate in a manner acceptable to the board.
3. The owner provides an air quality analysis showing the impact of the units on the nonattainment or maintenance areas of the Commonwealth unless the units are located in adjacent, contiguous states.

H. The compliance demonstration required by this section may include emission credits generated from early compliance with the requirements of 9 VAC 5-40-925 according to the provisions of 9 VAC 5-40-928.

I. The owner of a unit subject to subsections C and E shall be in violation of this section and the NO_x emissions limit in 9 VAC 5-40-925 if he fails to submit a NO_x emissions compliance demonstration acceptable to the board.

9 VAC 5-40-927. NO_x emissions banking plan.

A. The compliance demonstration required under 9 VAC 5-40-927 may include emissions credits which are retained in a bank in accordance with a NO_x banking plan approved by the board.

B. Each unit included in a NO_x emissions banking plan shall be a unit for which a baseline emission rate has been established in accordance with 9 VAC 5-40-926 B.

C. The owner of a unit meeting the requirements of subsection B of this section shall submit a NO_x banking plan for approval to the board by April 1, 2004 and, for a revision to an approved NO_x emissions banking plan, by April 1 of each year for which the NO_x emissions banking plan is to become effective.

D. A complete NO_x emissions banking plan shall include any elements specified by the board in a format acceptable to the board.

9 VAC 5-40-928. NO_x emissions early reduction credits

A. The owner of a unit for which a baseline emission rate has been established under 9 VAC 5-40-926 B may generate early reduction credits in the 2002 and 2003 ozone seasons if the following procedures are met:

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1. Each unit for which the owner generates any early reduction credits shall reduce its NOx emission rate, for each ozone season for which early reduction credits are generated, to meet the applicable baseline emission rate established under 9 VAC 5-40-926 B.

2. Early reduction credits are determined based on the unit's heat input for the ozone season control period multiplied by the difference between the applicable baseline emission rate established under 9 VAC 5-40-926 B (in lb/mmBtu) and the unit's NOx emission rate for the ozone season, divided by 2000 lb/ton, and rounded to the nearest whole number.

3. The owner shall submit a request for any early reduction credits which shall include documentation certifying that the reductions were achieved. The request is subject to approval and review by the board.

4. Early reduction credits are valid until October 1, 2005. Early reduction credits remaining after this date are permanently retired.

5. The owner may transfer early reduction credits to other owners, including owners in other states, subject to approval by the board.

B. Early reduction credits from sources in other states may be used to demonstrate compliance, provided such credits are certified as reduction credits by the source owner and applicable state air pollution control agency, in a manner acceptable to the board.

9 VAC 5-40-980. Compliance.

A. The provisions of 9 VAC 5-40-20 (Compliance) apply.

B. By (effective date plus six months) owners of affected facilities subject to 9 VAC 5-40-925 shall submit a control program which provides for compliance by May 1, 2004.

9 VAC 5-40-990. Test methods and procedures.

The provisions of 9 VAC 5-40-30 (Emission Testing) apply.

9 VAC 5-40-1000. Monitoring.

A. The provisions of 9 VAC 5-40-40 (Monitoring) apply.

B. Unless otherwise approved by the board, owners of fossil-fuel fired steam generators specified in subsection C of this section shall install, calibrate, maintain and operate systems for continuously monitoring and recording specified emissions in

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accordance with 9 VAC 5-40-40 and 9 VAC 5-40-41.

C. Fossil-fuel fired steam generators of greater than 250 million Btu per hour maximum heat input with an annual average capacity factor of greater than 30% (as reported to the Federal Power Commission for calendar year 1974, or as otherwise demonstrated to the board by the owner) shall be monitored for opacity except where:

1. Gaseous fuel is the only fuel burned, or

2. Oil or a mixture of gas and oil are the only fuels burned and the facility is able to comply with applicable particulate matter and visible emission standards without utilization of particulate matter collection equipment, and where the facility has never been found, through any administrative or judicial proceedings, to be in violation of any visible emission standard.

D. The continuous monitoring system shall be spanned at 80, 90 or 100% opacity.

E. Owners of electric generating units and non-electric generating units subject to 9 VAC 5-40-925 or choosing to participate in the compliance demonstration in 9 VAC 5-40-926 shall install, calibrate, maintain and operate systems for continuously monitoring and recording specified emissions in accordance with 40 CFR Part 75, subpart H.

9 VAC 5-40-1010. Notification, records and reporting.

A. The provisions of 9 VAC 5-40-50 (Notification, Records and Reporting) apply.

B. For the purpose of reports required under 9 VAC 5-40-50 C periods of excess emissions that shall be reported are defined as any one-hour period during which there are two or more six-minute periods when the average opacity exceeds 20%.

9 VAC 5-40-1020. Registration.

The provisions of 9 VAC 5-20-160 (Registration) apply.

9 VAC 5-40-1030. Facility and control equipment maintenance or malfunction.

The provisions of 9 VAC 5-20-180 (Facility and Control Equipment Maintenance or Malfunction) apply.

9 VAC 5-40-1040. Permits.

A permit may be required prior to beginning any of the activities specified below if the provisions of 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) and 9 VAC 5 Chapter 80 (9 VAC 5-80-10 et seq.) apply. Owners contemplating such action should review those

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provisions and contact the appropriate regional office for guidance on whether those provisions apply.

1. Construction of a facility.
2. Reconstruction (replacement of more than half) of a facility.
3. Modification (any physical change to equipment) of a facility.
4. Relocation of a facility.
5. Reactivation (restart-up) of a facility.
6. Operation of a facility.

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